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INFO RUCNRAQ/IRAQ COLLECTIVE
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UNCLAS SECTION 01 OF 02 BAGHDAD 001695

SIPDIS

STATE FOR NEA/I AND EEB
USDOE FOR PERSON

E.O. 12958: N/A
TAGS: ECON ENRG IZ PGOV
SUBJECT: MAINTENANCE PROGRAM YIELDS ROBUST ELECTRICITY GAINS IN 2008 -- BUT WHAT HAPPENS IN 2009?

¶1. (SBU) SUMMARY: Iraqi electricity output in the first four months of 2008 outstripped output for the same period of ¶2007. A year-to-year comparison for the January - April period shows that overall, the ME experienced a system-wide increase in electricity output of 20 percent per month. Only 8 percent of the increase is attributable to new gas turbine plants coming on-line. The balance stems from a seven-month old USG-funded program for operations, maintenance and sustainment (OMS) that squeezes more production out of existing generation assets. Generation plants operating within the OMS program have increased production by 30 percent per month in the comparative four month period. However, the OMS program will begin to cease operations on September 9, unless the GOI (specifically the Ministry of Electricity) acts now to pick up the costs of the program. END SUMMARY.

¶2. (SBU) To reverse the absence of a "culture of maintenance" in the power sector, the U.S. Mission's Iraq Transition Assistance Office (ITAO), together with the U.S. Army Corps of Engineers, Gulf Region Division (GRD) established the OMS program to introduce modern inspection, operations and maintenance protocols at six of the ME's major power plants. Since becoming fully operational, this program has increased plant production output by 30 percent per month, and plant availability (which measures the days per month a plant operates) and reliability (which measures the hours per day a plant operates) by nearly 20 percent per month. The cost of this improved capacity is less than 20 percent than the cost of the equivalent amount of electricity gained by constructing new generation plants.

¶3. (SBU) This program, however, is in use at only about 45 percent of the ME's current generation plants and the contracts that implement it will expire on September 9, 2008. The significant gains of this program argue in favor of the GOI retaining the existing program and expanding it to the rest of the ME's generation stations. Yet the ME has taken no steps either to retain the current contract with its own funds or to replace it with an equivalent alternative, despite strong Embassy encouragement. Without this program the progress made to date will be lost within months, and the potential for further gains by extending the program to the remaining plants will remain unrealized or at best be much delayed.

HOW IT WORKS

¶4. (SBU) The current 80 million USD OMS program distributes 42 ex-pat engineers and technicians and 60 local national staff among the six major Iraqi power plants. They work shoulder-to-shoulder with ME plant operators and other employees, teaching them best practices in inspection, operations and maintenance. The goals of the program are to

(1) increase production levels and enhance reliability of the ME's existing generation assets by employing modern inspection, operation and maintenance processes and procedures and (2) transfer that knowledge to the Iraqi plant employees. To date, the contractor (Parsons Brinkerhoff) has provided over 5000 work-hours of on-the-job-training (OJT) to ME employees.

¶5. (SBU) The program also offers extensive classroom hands-on training at a newly-constructed training facility at the Baghdad South power plant. The OMS team currently delivers approximately 2000 man-hours of OJT and classroom training each month. Over the course of the past year, ME personnel have increasingly participated in the training. In the next month or so, the installation of a remote monitoring system will allow around-the-clock, real time computer monitoring of most of the ME's gas turbine fleet of generators and will permit data collection from 12 of the ME's generation sites.

MEASURABLE RESULTS

¶7. (SBU) Iraq's national power generation network is supplied from three domestic sources: hydro-electric generation, which, because of the regional drought, has declined from 16 percent of the system's total in 2007 to 9 percent in 2008; thermal steam boiler generation, which in 2008 accounts for roughly 44 percent of the system total; and gas turbine generation, which makes up the remaining 47

percent.

¶8. (SBU) The OMS program has targeted only the steam thermal and gas turbine plants and has been fairly evenly distributed between the two technologies. Among the 6 power plants that participate in the program, there are nine generation stations: five gas turbine stations and four thermal stations. Together these units generate 3,050 MW of running capacity.

¶9. (SBU) A way to measure the OMS program's value is to compare its production results to the output levels of plants that operate without benefit of the program by generation technology. In total, the OMS plants have increased average output by 30 percent on a month-to-month basis for the first four months of 2008 over the comparable period in 2007. In that same time frame, plants not employing the OMS program have increased output 10.5 percent per month; most of that increase is attributable to new gas turbine generation coming on line.

¶10. (SBU) Among the steam thermal plants, OMS program plants experienced a month-to-month average 26.5 percent increase in the first four months of 2008 over 2007. The ME's non-OMS thermal plants only increased output by a monthly average for the period of 2.25 percent. Comparative results among the gas turbines was less dramatic, but still favored the plants operating under the OMS protocols. OMS gas turbine plant increased production output of 32 percent per month for the period, while non-OMS gas turbine plant increased output a monthly average of 20.5 percent. Apart from output increases, the OMS program also improved the availability and reliability of generation plant - which means the OMS plants have experienced fewer outages - by an average of 17 percent over the four-month period.

COMMENT

¶11. (SBU) The program's current contract expires on September 9, 2008. There is a six-month option to extend, but no USG funds to apply to it. We have pressed the ME to

explore extending and expanding this program, but as yet, the ME has taken no steps to do so. Following a June 1 meeting with CG Petraeus, however, the ME agreed for the first time to receive a detailed briefing on various possible options, which we will provide.

¶12. (SBU) Clearly, the OMS program has proved a measurable success. Our recommendation to the GOI is that, at minimum, it retain the current program and ideally, expand it to the rest of the ME's network. After just a few short months the OMS program is adding an additional 500,000 MWHrs per month to the grid at an all-in cost of approximately $160 per MWHr. By contrast, a new power plant would take years to construct at a ballpark cost of some $1000 per MWHr, excluding fuel and other operating costs. For now, the OMS program is essential to keep electricity numbers up, and to extend the useful life of these generation plants. We believe a GOI decision to expand the OMS program to the other half of the ME's generation base would extract more electricity from existing resources quickly and cheaply to further enhance supply. New generating plants need to be constructed as soon as possible, but the GOI needs the gains from this OMS program in the interim. These gains will dissipate in a relatively short time if the current OMS contract expires and there have been no GOI arrangements made to extend or replace it with an equivalent alternative.
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